

ABSTRACT OF THE DISCLOSURE

A non-volatile memory device includes a floating gate formed over a semiconductor substrate. At one end of the floating gate, there is a tapered protrusion having a horn-like or bird's beak shape. A control gate covers the floating gate except for the tapered protrusion. Sidewall spacers are formed adjacent to the floating gate and the control gate. An erasing gate is formed over the tapered protrusion of the floating gate.